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## C-A OPERATIONS PROCEDURES MANUAL

### ATTACHMENT

4.56.akl RHIC Zone 4z1 Sweep Checklist

Text Pages 2 through 4

C-A-OPM Procedures in which this Attachment is used.

4.56		

### Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Revision No. 00

Approved: \_\_\_\_\_  
Collider-Accelerator Department Chairman      Date

P. Ingrassia, W. MacKay

## RHIC Zone 4z1 Sweep Checklist

Team leader (TL) \_\_\_\_\_ Sweeper#2 (S2) \_\_\_\_\_

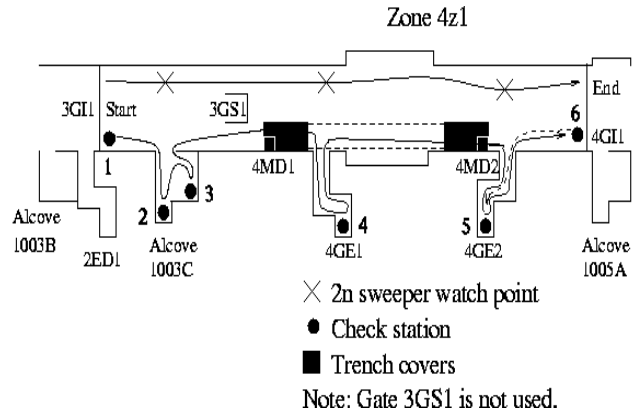
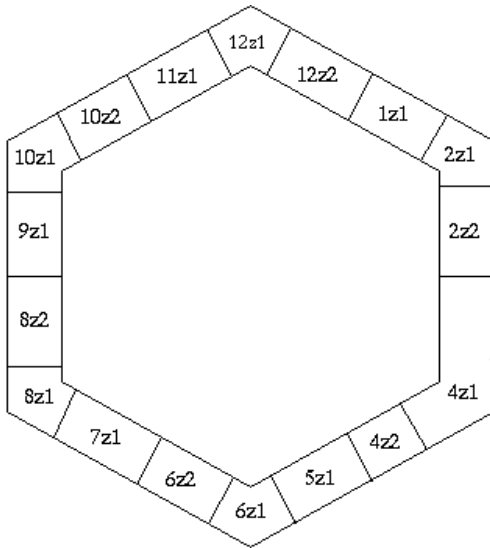
Time: \_\_\_\_\_ Date: \_\_\_\_\_

### Warning:

**IF** any workers are encountered during the sweep, **THEN** contact the OC to see if the sweep should be aborted. Workers shall leave the enclosure **WITH** the sweep team. **IF** the workers crash out of the enclosure **AND** do not exit with the sweep team, **THEN** the sweep shall be re-started.

### Prerequisites

- Two persons to perform the sweep,
- At least one sweeper not restricted from working at heights over five feet.
- RHIC Zone 4z1 Sweep Checklist (three pages)
- Required Tools: at least one flashlight,
- Chains and **APPROVED** padlocks (two each) for 4MD1 and 4MD2 trench gates.
- Two padlocks for Exhaust Fan Access Doors (may be in place)
- Walkie-talkies
- All Doors closed THEN 4z1 set to Controlled Access
- Keys: Sweep Reset key S/R011 (Team Leader), Controlled Access key CA010 (Sweeper#2), padlock key (RG184)
- RF Critical Devices are all safety off.



### Note:

References to positions in the tunnel are made using the RHIC magnets. The identity of the local magnet can be determined by looking up at the "lower" cable tray and reading the magnet name on a blue (B) or yellow (Y) label. For example, the convention used is: I05Q17 (Inside, Q17) or O-05Q17 (Outside, Q17). References are for inside locations and are visible only by the Team Leader

**CONTINUED ON REVERSE SIDE**

Check

- \_\_\_1 Sweep team enters zone 4z1 from gate 4GE2.
- \_\_\_2. TL opens 4GE2 gate by turning the CA010 key clockwise, in the Controlled Access key-switch while Operator in MCR presses simultaneous release for 4GE2.

**Note**

4MD1, and 4MD2 (trench) Gates must be reset before the 4z1 sweep may begin. IF both gates are padlocked THEN the trench need not be padlocked or searched.

- \_\_\_3 TL closes, chains, and padlocks the 4MD1 trench gate and resets the 4MD1 trench gate by turning the S/R011 key in the RESET keyswitch, on the 4MD1 panel, and verifies yellow RESET lamp is lighted.
- \_\_\_4 Sweep team goes to 4MD2.
- \_\_\_5 Sweeper trained to enter Class I confined space goes down the ladder, walks down the tunnel to the ladder at 4MD1, sweeps back to 4MD2 and climbs back up the ladder, closes and padlocks the trench gate.
- \_\_\_6 TL closes, chains, and padlocks the 4MD2 gate, then resets the 4MD2 trench gate by turning the S/R011 key in the RESET keyswitch, on the 4MD2 panel, and verifies yellow RESET lamp is lighted.
- \_\_\_7 S2 crosses under the accelerators and goes CCW to the outer 3GI1 gate while TL goes to the inner 3GI1 gate (Pass through the non-operational 3GS1 gate).
- \_\_\_8 TL resets 3GI1 by turning the S/R011 key in the RESET keyswitch at 3GI1-I
- \_\_\_9 TL observes RESET lamp light.
- \_\_\_10 TL STARTS SWEEP by turning the S/R011 key CW in the SWEEP key-switch on 3GI1-I (3CS1).
- \_\_\_11 TL observes AREA SECURED lamp blink once.
- \_\_\_12 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_13 TL stops to check the Exhaust Fan Vent Barrier at I03Q17
- \_\_\_14 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_15 S2 stands static watch at the electrical services alcove.
- \_\_\_16 TL enters the alcove and goes to the ladder at 3EL1.
- \_\_\_17 IF there is no mirror to verify no one is on the landing at the top of the ladder, THEN TL must climb the ladder to verify no one is on the landing and to check that 3EL1 is closed.
- \_\_\_18 TL resets gate 3EL1 using the S/R011 key in the Reset keyswitch at the bottom of the ladder.
- \_\_\_19. IF 3EL1 will not reset THEN TL climbs the ladder, closes 3EL1, then repeats step 18.
- \_\_\_20 TL observes RESET lamp lights after RESET.
- \_\_\_21 TL sets second check station (3CS2) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_22 TL observes AREA SECURED lamp blink once.
- \_\_\_23 TL goes to the far corner of the alcove to 3CS3.
- \_\_\_24 TL sets third check station (3CS3) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_25 TL observes AREA SECURED lamp blink once.
- \_\_\_26 TL checks inside EVERY rack and then sweeps out the alcove and joins S2.
- \_\_\_27 TL checks fan vent barrier is in place in vent above S2's head and overhead barrier is in place.
- \_\_\_28 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_29 Sweep Team stops to check the inner and outer Exhaust Fan Vent Barriers at I03DU7.
- \_\_\_30 Sweep Team sweeps Clockwise (CW) around RHIC.
- \_\_\_31 Sweep Team sweeps through the non-operational gates at 3GS1.
- \_\_\_32 Sweep Team checks behind and above electrical service panels at I-O3D5 including the overhead barrier.
- \_\_\_33 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_34 TL confirms padlock in place on Exhaust Fan Access Door (4XEF1) near I03Q3.
- \_\_\_35 S2 crosses under accelerators to stand static watch "inside" between O-03D0 and 3-DX

**CONTINUED ON NEXT PAGE**

- \_\_\_36 TL walks down 4GE1 labyrinth.

- \_\_\_37 TL resets 4GE1 by turning the S/R011 key in the RESET keyswitch on the 4GE1-I box.
- \_\_\_38 Observe the yellow RESET lamp is lighted.
- \_\_\_39 TL sets fourth check station (4XCS2) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_40 TL observes AREA SECURED lamp blink once.
- \_\_\_41 TL sweeps up the labyrinth and joins S2.
- \_\_\_42 S2 crosses under the accelerators to the "outside" of the tunnel.
- \_\_\_43 Sweep Team sweeps Clockwise around RHIC to the Vapor Barrier.
- \_\_\_44 S2 joins TL and both sweep through and close the vapor barrier door.
- \_\_\_45 TL goes down the stairs and stands static watch at a position where the area under the blocks supporting the "accelertors" can be seen.
- \_\_\_46 S2 crosses under the "accelerators" to the far side of the hall, climbs over the red pipe "fence" and searches under the raised floors using the flashlight.
- \_\_\_47 Sweep Team sweeps CW around the RHIC.
- \_\_\_48 S2 stands static watch opposite 4GE2 labyrinth.
- \_\_\_49 S2 confirms padlock is in place on Exhaust Fan Access Door at IC7B
- \_\_\_50 TL walks to 4GE2 gate.
- \_\_\_51 TL sets fifth check station (4XCS3) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_52 TL observes AREA SECURED lamp blink once.
- \_\_\_53 TL sweeps up labyrinth and joins S2
- \_\_\_54 Sweep Team sweeps CW around the RHIC
- \_\_\_55 Sweep Team checks behind and above the electrical panels at I4Q5D5 including the overhead barrier.
- \_\_\_56 Sweep Team sweeps CW around the RHIC
- \_\_\_57 Sweep Team stops to check the inner and outer Exhaust Fan Vent Barriers at I04D8.
- \_\_\_58 Sweep Team sweeps Clockwise (CW) around RHIC to 4GI1 gates.
- \_\_\_59 TL resets 4GI1 by turning the S/R011 key in the RESET keyswitch on the 4GI1-I box.  
(Note: 4GI1 may reset as part of the 4z2 sweep instead.)
- \_\_\_60 Observe the yellow RESET lamp is lighted.
- \_\_\_61 TL ends the sweep by setting the sixth check station (4XCS4) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_62 TL observes AREA SECURED lamp light amber.
- \_\_\_63 Sweep Team walks back to 4GE2.
- \_\_\_64 TL contacts MCR for simultaneous release for gate 4GE2.
- \_\_\_65 Sweep Team sweeps out 4z1 through 4GE2 door.
- \_\_\_66 TL contacts MCR and confirms that gates are reset and 4z1 zone indicates sweep is good.

**Note:**

IF the AREA SECURED, and GATE RESET lamps are not lit THEN contact MCR to verify sweep is good and gate(s) are reset.

- \_\_\_67 After returning keys to the RHIC key tree, TL RESETS both Remote Access Gates 4GE1 and 4GE2 from the RHIC PanelView at MCR\_2.
- \_\_\_68 After returning to MCR and verifying that all information is filled out completely, TL files the checklist in FY\_xx Sweep Log binder.